

# Adherence to lipid-lowering therapy in the first and second year following myocardial infarction

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**Introduction:** Statins play a crucial role in the secondary prevention of cardiovascular events; however, patient adherence remains suboptimal. This study aimed to evaluate adherence to statin therapy and its impact on LDL cholesterol levels at 12 and 24 months post-myocardial infarction.<sup>1</sup>

**Patients and Methods:** This retrospective cohort study included 1,521 patients treated for acute myocardial infarction at our institution from January 1, 2017, to August 1, 2023. Adherence scores were assigned during outpatient visits or telephone follow-ups. Additional data on cholesterol levels, medications, and comorbidities were obtained from electronic health records. Patients were categorized into three groups: highly adherent, moderately adherent, and non-adherent. Statistical analyses were performed using the Mann-Whitney U test for continuous variables and the Chi-square test for categorical variables.

**Results:** The adherent cohort was significantly younger (mean age: 66 vs. 62 years,  $p < 0.0001$ ) and had a lower prevalence of diabetes (39.6% vs. 25.7%,  $p < 0.0001$ ). Baseline LDL cholesterol levels were similar across groups (3.2 mmol/L in non-adherent vs. 3.4 mmol/L in moderately adherent and 3.5 mmol/L in highly adherent). After 12 months, all groups showed a significant reduction in LDL levels ( $p < 0.0001$ ), with values of 2.6 mmol/L in non-adherent, 2.3 mmol/L in moderately adherent, and 1.8 mmol/L in highly adherent patients. The adherent group had a greater decrease in LDL after 12 months and continued to show reductions at 24 months (2.2 mmol/L vs. 2.0 mmol/L vs. 1.7 mmol/L). Notably, 59.5% of adherent patients reached target LDL levels after 12 months.

**Conclusion:** These results highlight the importance of adherence to lipid-lowering therapy in achieving target LDL cholesterol levels. Prioritizing patient adherence is essential before introducing new hypolipidemic agents. Further research is needed to explore the relationship between adherence and patient survival outcomes.

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## LITERATURE

- Virani SS, Smith SC Jr, Stone NJ, Grundy SM. Secondary Prevention for Atherosclerotic Cardiovascular Disease: Comparing Recent US and European Guidelines on Dyslipidemia. *Circulation.* 2020 Apr 7;141(14):1121-1123. <https://doi.org/10.1161/CIRCULATIONAHA.119.044282>